

## CLAIMS

We Claim:

1. In a missile having an active radar seeker, said seeker operating at a given intermediate frequency and comprising a millimeter wave radar and antenna, first local oscillator, a first mixer, an analog-to-digital converter, a first switch coupled between said first mixer and said converter, and a digital signal processor, said processor containing therein and using a set of logic capable of identifying threat radar signals, **what is claimed is a means for dualizing said missile's seeker capability, said dualizing means** being located within said missile and passively detecting target air defense radars, said dualizing means further cooperating with said active millimeter wave radar seeker to guide said missile toward a more accurate impact on said air defense radars, said **dualizing means** comprising a plurality of identical radio frequency detectors, each of said frequency detectors comprising: an anti-radiation homing antenna positioned to collect radar frequency from said air defense radar; a second local oscillator, the frequency of said second oscillator being selectively adjustable; a second mixer coupled between said anti-radiation homing antenna and said second oscillator to mix said radar frequency and said adjustable frequency to produce an intermediate frequency usable by said active seeker; and a means for coupling said intermediate frequency to said analog-to-digital converter, ultimately to enable said missile to impact on said air defense radar for a more complete destruction of said defense radar.
2. In a missile having an active radar seeker, **a means for dualizing seeker capability** as set forth in claim 1, wherein said means for coupling said intermediate frequency to said analog-to-digital converter is a second

switch coupled between said second mixer and said converter, said second and first switches never being concurrently open.

3. **A seeker capability dualizing means** as set forth in claim 2, wherein said plurality of identical radio frequency detectors comprises at least three sensors having three corresponding anti-radiation homing antennas, wherein said antennas are disposed at regular intervals along the circumference of said missile so as to enable the production of data relative to azimuth and elevation of said missile with respect to said target air defense radar.
4. **A seeker capability dualizing means** as set forth in claim 3, wherein said multiple detectors are multiplexed to said converter such that their respective second switches are selectively activated in coordination with each other as well as with said first switch.
5. In a missile having an active millimeter wave radar seeker, said seeker operating at a given intermediate frequency and comprising a millimeter wave radar and antenna, first local oscillator, a first mixer, an analog-to-digital converter, a first switch coupled between said first mixer and said converter, and a digital signal processor, said processor containing therein and using a set of logic capable of identifying threat radar signals, **what is claimed is a passive detector added to supplement said active seeker, said passive detector** detecting target air defense radars and cooperating with said active seeker to guide said missile toward a more accurate impact on said air defense radars, said **passive radar detector** comprising four identical radio frequency sensors, said frequency sensors being disposed at regular space intervals along the circumference of said missile and each sensor comprising: an anti-radiation homing antenna positioned to collect radar frequency from said air defense radar; a second local oscillator, the frequency of said second oscillator being selectively adjustable; a second mixer coupled between said anti-radiation homing

antenna and said second oscillator to mix said radar frequency and said adjustable frequency to produce an intermediate frequency usable by said active seeker; and a means for coupling said intermediate frequency to said analog-to-digital converter, ultimately to enable said missile to impact on said air defense radar for a more complete destruction of said radar.